

## **Abstract**

**Intercalation cathode materials especially suited for use in high-voltage, high-energy lithium rechargeable batteries, having the formulae  $\text{Li}[\text{Li}_{(1-2x)/3}\text{M}_y\text{Mn}_{(2-x)/3}\text{Ni}_{(x-y)}]\text{O}_2$ , where  $0 < x < 0.5$ ,  $0 < y \leq 0.25$ ,  $x > y$ , and M is one or more divalent cations from Ca, Cu, Mg, and Zn. A process for making such materials is also provided.**